This pamphlet is intended merely for circulation among railroad counsel and traffic managers. It originally took the form of a letter dictated to several traffic men for the purpose of getting their ideas of the principles which govern the fixing of freight rates. The form has been changed from a letter to a pamphlet in order that the difficulties might be stated more fully, but the purpose remains the same, namely, to secure information, suggestions and criticisms.

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North Station, Boston, October, 1903.

CERTAIN PROBLEMS RELATING TO RAILROAD RATES.

By Edgar J. Rich, *Attorney, Boston & Maine Railroad.*

Since the Supreme Court of the United States decided in carefully considered opinions that the Interstate Commerce Commission has no power to fix the rates of transportation of passengers and freight, there has been considerable agitation by the Commission, and in the press, to induce Congress to give to the Commission the power to determine rates. The Cullom Bill, which has been pending in two congresses, was drawn for this purpose, and other bills with the same object in view have been introduced. The strenuous efforts of the Commission to secure the passage of some such law have aroused on the part of the railroads a keen sense of the results which would follow the placing of such stupendous power in the hands of any body of men. The Commission on several occasions has drawn attention to the fact that, whereas formerly competition was effective in keeping rates within reasonable limits, now, the elimination of competition through numerous consolidations, and the effecting of community of interests, make necessary some form of governmental control. The Commission claims that these decisions of the Supreme Court have shorn it of all power, and that its opinions are not treated with respect by the railroads.

Powers of the Interstate Commerce Commission.

It is not true, however, that the Commission has no powers, for in addition to the power to compel publicity, which is of great importance, it has the power to declare rates unreasonable, and, through the United States courts, to compel the railroads to desist from charging such rates as are found by the court to be unreasonable. In other words, if at a trial in the United States Court, the court is of opinion that the Interstate

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Commerce Commission was correct in declaring certain rates to be unjust and unreasonable, that court can issue a decree compelling the railroads to desist from charging such rates. This is a great power and a salutary one, and undoubtedly is ever present in the mind of any railroad which may have an inclination to charge all that the traffic will bear. The Commission seeks the power not merely to declare a rate unreasonable, but to determine what is reasonable. It may be conceded that there should be some disinterested body which should have the power to determine whether a rate is reasonable or not, but to give to that body power to fix a rate is an entirely different matter.

The Commission, furthermore, has power to prevent unjust discrimination, which unquestionably has been in the past one of the great evils; and to the exercise of this power there is no limitation. In a word, it has the power to compel the railroads to treat all persons and localities equally, with due allowance for dissimilar circumstances.

Pending Legislation to Increase the Powers of the Commission.

There are now pending before Congress, several bills which have for their object increasing the powers of the Commission. The principal changes contemplated are the following: —

(1.) The absolute power to fix rates by determining what shall be the maximum and minimum rates, and as a corollary of this, the power to make changes in classification.

(2.) The power to determine upon what terms and conditions business shall be interchanged between connecting carriers, and also to determine how the joint rate shall be divided.

(3.) Another change of far-reaching consequence is the modification proposed in the long and short haul clause. At the present time carriers are justified in making a lower rate for the longer distance when compelled either by competition of water carriers or of railroads. Under the proposed law it will be impossible for railroads to charge less for the longer distance unless the Commission authorizes it. Such a law would tend to

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deprive railroads of a considerable amount of traffic wherever there was water competition, for although the Commission might authorize a less rate if convinced that railroads would lose traffic in consequence of such competition, nevertheless, the railroads would never be able to know whether or not the Commission would regard the competition as a sufficient justification for such difference in rate.

In asking for the rate-making power, the Commission is seeking a power which affects the prosperity of our country in a way which can hardly be grasped ; but more than that, it would have a task which no body of men, however able and fair-minded, can perform. Every traffic manager in the country has his powers taxed to the utmost to solve the various problems which arise on the comparatively small traffic under his jurisdiction. In order to solve the problems correctly, he must be thoroughly familiar with local conditions, with the population of places along the line, with their industries, with crops, with competition by water and by rail, and with a hundred and one things which must go to determine what ought to be the rate on a particular commodity to a particular place. If you should select the five most experienced railroad traffic men in the country, and give to them a desire to serve, equally and impartially, the public and the railroads, they nevertheless could not solve the various problems which continually arise, as well as could the men on the spot. It is unfortunately a fact, in many instances, that the local traffic man in fixing rates fails to recognize that he is a quasi-public servant, and not an employee of a private concern whose primary object is to make the largest possible income. Traffic men must be educated up to a point where they appreciate the public functions of the properties entrusted to their charge. If, however, these men have a proper appreciation of these responsibilities, there can be no question that the traffic manager of a railroad is in an infinitely better position to determine what rates should be charged than any body of men, no matter how able, who may be sitting in Washington and whose opinion must be formed by the unsatisfactory method of listening to testimony. Judge Cooley, when Chair-

man of the Interstate Commerce Commission, spoke of this herculean task in these words:

"In those sections of the country in which the reasons, or supposed reasons, for exceptional rates are most prevalent, the Commission would, in effect, be required to act as rate makers for all the roads. . . . This in any considerable state would be an enormous task. In a country so large as ours, with so vast a mileage of roads, it would be superhuman. A construction of the law which would require the performance would render the due administration of the law altogether impractical, and that fact tends strongly to show that such a construction could not have been intended."

Walker D. Hines, Esq., First Vice-President of the Louisville & Nashville Railway Company, in his able address before the American Economic Association, at Philadelphia, on December 27, 1902, very cogently stated the difficulties. He said:

"The regulation of railroads is eminently and exclusively a practical question, because no business is more severely practical or more intricably interwoven with all the special and peculiar conditions of every phase of the commercial and industrial life of the country. The practical difficulties incident to the construction of railroad rates cannot be overestimated. Every article of commerce has its peculiar characteristics and develops its own peculiar conditions. Every source of supply for raw materials has its local peculiarities, and many of them must look to constantly shifting markets. Every plant for the manufacture of anything has its individual requirements. Every commercial centre has its own individuality, made up of a variety of conditions affecting the sources of supply, markets of disposition, methods of transportation, and its own physical aspects. Every railroad has its own problems to meet, its own phenomena of supply and demand of cars and locomotives, its own difficulties as to grade and curvature, its own varying conditions as to the direction in which cars move empty and trains are lightest; its own problems of congestion, its own duties to industries and communities dependent upon it; and the whole of this differs for every railroad and for every season of the year, and on each railroad these conditions may vary on every division and at every terminal. Conceive, if possible, of the continued but constantly varied interaction of all of these commercial, industrial and transportation conditions and problems, and of numerous others

impossible to enumerate, and some idea may be obtained of the forces which make railroad rates and of the complexities and difficulties of the subject."

It is hard to appreciate the number of changes in rate which is rendered necessary by commercial conditions. The Commission has found that the daily changes are more than 260, on the average. Assuming that many of these changes are unnecessary, yet the fact remains that in all probability a large proportion of them are changes which are advantageous to the public as well as to the railroads. If the Commission be given power to fix rates, and if in the course of time the rates throughout the country have been passed upon, in one form or another, by the Commission, it is easily seen how impossible it would be for the Commission to give proper consideration to an hundredth part of the cases which might come before it, for each case under the terms of the act would involve a public hearing.

It is not my intention, however, to discuss in detail this great problem which is now before the railroads and the country. I have merely outlined the question and suggested some difficulties. My purpose is, rather, to attempt some analysis of the great question of the standard by which the reasonableness of rates is to be tested.

What is the Test of the Reasonableness of Rates?

A railroad can charge only such rates for the transportation of passengers and freight as are reasonable. The Interstate Commerce Act forbids the imposition of unreasonable rates, but in so doing has added nothing to the common law obligation of the carrier.

There always has been, and probably there always will be, controversy between the railroads and the public, — the one claiming that their rates are reasonable, the other that they are unreasonable. Suits are brought in the courts, proceedings are instituted before the Interstate Commerce Commission, and legislatures are being continually agitated, to compel the railroads to comply with their common law and statutory obliga-

tions, and yet throughout all the decisions of the courts and the Commission and in the discussions in the legislatures, there is little said about the standard by which rates are to be tested. The consequences are that the railroads and the public are unable to meet upon a common ground. The railroads are often accused by the public of extortion and disregard for the public interest when the whole trouble comes from an honest difference of opinion in regard to the standard by which rates are to be tested. The railroad asks if less than a cent a ton per mile can, under any circumstances, be declared unreasonable, and the public answers that the railroad is earning from 6 to 10 per cent. dividends upon its capital stock, which in itself shows that the public is not receiving the rates which it ought to receive. My attempt now is to arrive, if possible, at some common understanding, and to discuss certain elements which enter into any consideration of the standard of reasonable rates. By such an analysis it will at least be possible to arrive at an understanding in reference to certain elements and to know wherein the public and the railroads differ as to others.

The Public Service Functions of a Railroad.

The public has no concern, broadly speaking, with the profits which an individual or a corporation may make in the manufacture of hats, or in the making of lead pencils, or in the production of cotton cloth. Has the public any more to say about what shall be the profits of a railroad? It certainly has a great deal more to say. In the first place, a railroad cannot be constructed without the granting to the corporation of certain vast powers, which powers belong to the people and which are given to the corporation through the people's representatives, the legislatures. Without the power to take land against the will of the owner no railroad could be laid out at any but an exorbitant expense, if at all. The corporation therefore receives from the people a great power, of which the people are the sole repositories. Again, in the present state of civilization, the people are as absolutely dependent upon the railroad as upon food and clothing. In

fact, should the railroads suddenly cease to operate, the people in many sections of the country would starve. Again, in the very nature of the undertaking, the railroad is to a greater or less extent a monopoly; in short, the people cannot exist without railroads, and that highest law of nature, self-preservation, is a sufficient justification for public supervision.

The railroads, therefore, are public service corporations, and as such must serve the public, and the public has a right to demand that it shall be served faithfully and well. It is true, also, that the managers of great railroad properties, as a rule, recognize that they are not free agents to exploit the property submitted to their charge in any way they may see fit. But, on the other hand, there are many railroad officials who fail utterly to recognize the proper functions of the railroad, and are inclined to hold that all restraints on the part of the people are unjustifiable and simply a demonstration of the ignorant power of the people or the stupidity of their representatives. Such men have done more to disturb the relations between the public and the railroads than any other influence. By their arrogant attitude they have alienated all public sympathy and support, and find themselves at war with the powers which made them and to which they are responsible. This attitude on the part of a few has redounded to the everlasting harm of those railroads which are endeavoring to serve the public according to the measure of their obligations. These men have been one of the chief causes of the growth of the socialistic element in the community, and have been instrumental in arraigning against the railroad the public sentiment of a great body of intelligent people. No socialistic movement has ever done, or will ever do, as much injury to the railroad corporate interests as has been done, within the last few years, by men in direct charge of these properties, who by their unreasonable attitude before Commissions and other public bodies have shown to the great mass of the thinking public that they utterly fail to comprehend the dependence of the properties submitted to their control on the public which created them. The reason why this attitude is assumed by some railroad managers is due to two causes. First, because

in many instances the stockholders and directors demand that the officials of the road shall earn all the money possible for the stockholders, and the attention of the managers is simply directed towards receiving from the public as much as possible and giving out to it as little as possible; and secondly, in many instances, the railroad managers, although competent to run a railroad, as a railroad, are too narrow-minded and too ignorant of the great problems to be able to grasp the fundamental proposition that a railroad must be faithful to the people from whom it derives its rights and powers.

If there is a disregard of the rights of the people on the part of many railroad managers, there is on the part of the people a disregard of the rights of the railroad. The people have the right and the power to operate the railroads themselves if they see fit. But from the inception of railroad building the public has felt that the interests of all concerned would be best served if the building and operation of railroads were left to private enterprise. It is, unquestionably, fortunate for this country that this was so, for it is only through the enterprise and daring of private individuals that anything great in industrial lines can ever be accomplished. Having left, therefore, the building and management of railroads to private enterprise, it is in the interests of all concerned that that enterprise shall be left as unfettered and untrammelled as possible, and that it shall have the incentive of gain and power to urge it on to still greater efforts. One of the principal obstacles in the successful operation of railroads is that they are continually fettered by unnecessary and minute exactions which are forced upon them by the legislative power, and that at every turn they are encountered by some prohibition or command which emanates from the fertile brain of some representative of the people. This attitude of the public is due in considerable measure to the ignorance and selfishness of the representatives of the people; but it is also due, in no small degree, to the stubbornness and ignorance of the railroad managers themselves. If a railroad refuses to favor the public in reasonable matters, and, instead of recognizing the rights of the public, persistently ignores them, it is not unnatural that the

people will demand that the railroads shall serve them according to their ideas.

If a servant fails to recognize and provide for the needs of his master, the servant is likely to be harassed by minute and explicit details as to how he shall perform his duties; but if a servant serves his master faithfully and well, it is a wise master who leaves to his servant the working out of the details. It encourages the servant and makes him ambitious to do better if he is put upon his mettle; it relieves the master of annoyance and vexation, and the result is the establishment of harmony between the master and the servant. Therefore, the railroad should, first and foremost, recognize the authority of its master and try to serve it faithfully, and then the master will place greater responsibilities upon its servant and leave to it the working out of the details.

Analysis of the Earnings of a Railroad.

Roughly, the gross earnings of a railroad may be divided into three parts. First, the amount necessary to pay wages and salaries of employees and officers; secondly, the amount necessary to keep the railroad and its equipment in safe and proper condition; and thirdly, the return to the capital invested in the railroad.

We seldom if ever hear complaint on the part of the public that the employees or officials of a railroad are paid too much. The salaries of the managing officers are not as high as the salaries of officers in charge of private enterprises of much less magnitude, and the wages of the railroad employees are certainly not greater in proportion to the labor and the intelligence of the employees than in any other business.

In regard to the second part, namely, the amount necessary to keep the railroad in safe and proper condition, the public directly benefits by every dollar which is wisely expended. The building of a secure road-bed makes travel safe; the building of stations accommodates the public, and if money is spent in ornamentation it appeals to the pride of the community and of

the travelling public; the use of powerful and expensive locomotives enables the public to travel with greater speed, and, in short, every dollar expended in construction and equipment is for the benefit, direct or indirect, of the public.

There is, therefore, then, left only the third element, namely, the return to the bondholders and stockholders, about which the public has any reasonable ground for complaint. If, therefore, it is possible to arrive at what is a just return to the capitalists in the form of interest or dividends, we ought to be able to arrive at a common standard, whereby reasonableness of rates may be determined. If the earnings of a railroad are no greater than to make reasonable compensation to the employees, to provide reasonable facilities for the public, and to pay reasonable return to the capitalists, then there can be no cause for complaint on the part of anyone; and if, at the prevailing rates of fare and freight, more than this sum is earned, the surplus should either go back to the public in some form or other, or else the rates should be lower. All this is axiomatic. It is intended for nothing more than an analysis, and we certainly have not progressed far in solving the question of the reasonableness of rates. But we have got this far, if we can determine what is a fair return to the capitalists, it must be conceded that everything over and above that must be returned to the public in some form or other.

What has been done by the Public towards fixing the Rate of Return for Capital?

If, at the inception of railroad building, the public had said to the railroad promoters, we will give you these large powers on condition that if the return to your capital is more than so much per cent., the balance shall be turned over to us, and capital had been invested on the faith and strength of such an understanding, it would seem to be right that the investors should receive a return equal to the amount fixed as the limit by the legislatures. This is an aspect of the question which appears to have been utterly ignored by those who are the most strenuous exponents of the people's rights, and yet it is hard to see just

how this argument is to be met. Now, as a matter of fact, in many railroad charters a limit is fixed beyond which return to capital cannot go; and when not fixed by the charter, it is often fixed by general laws of the Legislature. An examination of railroad charters will show that the limit on dividends varies from 8 per cent. to 20 per cent. Under the general laws in many States, the maximum rate of dividend is not often placed at less than 10 per cent. In New York, for instance, Legislature cannot reduce rates so that the net profits shall be less than 10 per cent., and in Arkansas the limit is 15 per cent.; in New Hampshire the public statutes provide that "When the net income of any railroad shall exceed 10 per cent. upon its stock, the Legislature may alter and revise the rates of toll for freight and passengers as it deems just." In Virginia the limit is 10 per cent., and the North Carolina general laws provide that the rates shall not be reduced so as to make the profits less than 6 per cent.

It is true that in all States there is no general law regulating the profits of a railroad. Nevertheless, whenever the public has fixed a rate beyond which railroads cannot pay dividends, they have always set the limit beyond anything which has been earned by railroads affected by these laws.

The territory east of the Mississippi and north of the Ohio is the most densely populated of any portion of the United States, and the amount of traffic is undoubtedly the greatest. It is a territory which includes such great railroad systems as the Pennsylvania, New York Central & Hudson River, Lake Shore & Michigan Southern, Big Four, Wabash, and Boston & Maine, and yet it is a surprising fact, that of the thirty railroads in the official classification territory, during the year 1900, sixteen paid no dividends on the common stock; one paid a dividend of 1 per cent., one of $3\frac{1}{2}$ per cent., two of 4 per cent., three of 5 per cent., two of 6 per cent., three of 7 per cent., one of 8 per cent., and one of $8\frac{3}{4}$ per cent. A further analysis of the dividends paid by these railroads shows that the average dividend upon the capital stock, including both the common and the preferred, was less than $2\frac{1}{2}$ per cent.

This is an extraordinary showing for the railroads in the most populous part of the United States in a year of the greatest prosperity. Certainly, railroads as a whole have not prospered as have other industries, and the stockholders have not profited at the expense of the public. Is it not pertinent to ask why the public should enter into an agreement with its servants, whereby they are entitled to earn a certain recompense, and then seek in every possible way to deter them from ever being able to get the return which they in law are entitled to? It looks almost like a breach of faith.

The importance of the limitation of dividend in determining the question of reasonableness of rates has been recognized by the Interstate Commerce Commission in the remarkably able opinion "In the Matter of Proposed Advances in Freight Rates," decided April 1, 1903. It says:

"It is plain that until there be fixed, either by legislative enactment or judicial interpretation, some definite basis for the valuation of railroad property, and some limit up to which that property shall be allowed to earn on that valuation, there can be no exact determination of these questions. In the absence of such a standard, the tribunal, whether court or commission, which is called upon to consider this matter, can only upon the whole exercise its best judgment."

The important point, however, is ignored, that in many States a limitation has been fixed, and that in only a few instances have railroads even approximated to this limit. Certainly, if more than half the railroads in the most populous portion of the country are unable to earn anything on their common stock, and if, taking the railroads as a whole, they earn less than 2½ per cent. on both common and preferred stock, there ought not to be complaint because a railroad so fortunately situated as the Lake Shore & Michigan Southern Railroad earns 7 per cent. on its common stock.

Furthermore, it is always well to bear in mind that the present stockholders of the railroads paying large dividends have, in most instances, bought their stock on a 4 or 5 per cent. basis or less, and that any reduction in dividends would be a gross injus-

tice to them. Again, in some States, like Massachusetts, new stock sold for permanent improvements has to be sold at the market price, and recently, Boston & Maine stock paying 7 per cent. dividends was sold at 190, thus netting the purchaser only $3\frac{6}{19}$ per cent.

What is the Proper Basis of Capitalization?

Assuming that it is possible to arrive at the rate of interest which capital is justified in receiving, upon what basis of capitalization should such rate be reckoned? It is clear that any capitalization which is based upon a fictitious value is wrong; for, as has happened in the cases of many railroads, the stock and bonds were largely watered. The capitalization to be used as a basis must have eliminated every element which went to make up the false capitalization. But we still are confronted by another problem. Shall the basis of capitalization be the original cost of the railroad plus the amount of capital which has been put in for permanent improvements, or shall there be taken as a basis of capitalization the amount which would be required to build a new railroad of similar extent and kind? This latter basis is the one which appears to have been approved by the Supreme Court of the United States without any careful consideration or analysis. But is it the proper basis? If the Government, at the inception of railroading, had itself undertaken the building and operating of railroads, a certain amount of capital would have been required, and this capital would have to be borrowed by the Government, and interest would have to be paid upon it. Under private ownership, capital is advanced by private individuals, and they look to the productiveness of the property, whereas those who loan money to the Government for the building of a railroad, would look to the Government for its security and reimbursement. In the case of Government ownership, the whole people of the country are taxed, largely for their own benefit, but, nevertheless, in a measure, for the benefit of those making the greater use of transportation facilities. Under Government ownership, the people, as a whole, would be obliged to pay interest on the original investment, and

upon all subsequent investment for extension or improvement of the property. What reason is there, therefore, why private individuals who have invested in railroads should not be entitled to receive return on all that they have put in, even though at any particular time, the plant could be duplicated for less than the amount expended? Perhaps, however, the difference is not important, as a railroad which is properly financed endeavors to take from the earnings a sufficient amount to keep up the plant so that at any particular time it is fair to assume that the cost of duplicating a plant would not be much less than the original cost plus the cost of improvements. This, too, affords a justification for a railroad accumulating a surplus — if surplus it be called — and turning it into the property to increase its efficiency. In fact, it is impossible from the examination of the accounts of railroads to determine whether or not any particular railroad is accumulating a surplus in the sense that there is a profit over and above operating expenses, for it is a well-known fact that the best railroads, those which are most soundly financed, charge to operating expenses a large amount which goes into the bettering of the property. If money has been honestly expended in original construction and in improvements, the difference between the cost and the present value would probably not be very material; for, with the lapse of time, some things have greatly increased in value, and particularly that element which is one of the largest elements of cost, namely, land. Nevertheless, in all fairness, it would still seem that the basis to be used, if there is a difference between these two bases, is that of the honest original cost plus honest expenditure for keeping the property up to a high standard.

Conclusions as to Rate of Dividend.

Given, then, a capitalization which represents honest expenditure, there certainly can be no complaint upon the part of the public if stockholders receive a return not greater than that set forth in the original contract, which, in few if any cases, has been fixed by the public at less than 6 per cent.; and, if by reason of commercial and competitive conditions, more than

one half of the railroads in the most densely populated portion of the country are unable to pay anything, and the best situated railroads only pay 7 or 8 per cent., it would seem as if it were hard to establish the proposition that railroad rates were unreasonably high. It is not possible for all railroads to pay the same rate of per cent., due to commercial and competitive conditions; and furthermore, if, through want of foresight of the promoters, a railroad is built through a country which furnishes little traffic, the railroad ought not to expect to pay to the stockholders the same returns which are paid by a railroad operating through a thickly settled and prosperous country. And yet, such railroads ought not to be expected to bear the whole burden, and to transport freight and passengers from local points at the same rate that they are transported on other lines. If it had not been for the railroad, the community would not have developed even as far as it has, for the community is as much dependent upon the railroad, as the railroad is upon the community. That community, therefore, ought to expect to pay more for its transportation than other more favorably situated communities, and the railroad thus situated ought to be able to pay to its stockholders a moderate rate upon the capital invested, although in doing so it may charge the community much higher rates than are charged elsewhere. Therefore, any legislature which seeks to place all railroads upon a dead level of rates, based upon so much per passenger per mile, or per ton per mile, is unjust to the railroads. Under such circumstances, a railroad can be safely trusted to keep its rates at as low a point as possible, for only in this way can travel and traffic be stimulated. Such a railroad cannot expect and ought not to place its rates so high that it can pay unreasonably large dividends to its stockholders, but it ought to be able to make a moderate return to capital which built the railroad and, in building the railroad, increased the prosperity of the communities through which it runs.

The more fortunately situated railroad ought to be allowed to share in the general prosperity of the community, which, undoubtedly, it has been largely instrumental in building up, and to attempt to reduce such a railroad to the low level of less

fortunate railroads would be an injustice to those who had risked their capital in originally building a railroad. It would, therefore, seem to be true that it is impossible to say what is the proper rate of return upon capital invested in railroads, because a rate which would be fair to one would not be fair to another. It would be manifestly a burden upon the public, and an unjust burden, if a railroad running through a sparsely settled section of New Hampshire should be allowed to pay ten per cent. dividends. But it would be equally unjust if a railroad running through the populous portions of New York and Ohio should not be allowed to share in the general prosperity of the community; and ten per cent. upon an honest capitalization under such circumstances might not be unreasonable.

It seems to be an unavoidable conclusion that it is impossible to fix upon any uniform basis of return to a railroad, except that the most favorably situated shall not pay more than the people have set as a maximum, but it is contrary to justice, contrary to the instincts of a progressive people, that a railroad fortunately situated and ably managed should not be allowed to pay dividends in excess of the average return for capital invested in railroad enterprises.

We have not reached any very accurate standard of rates, but two or three propositions seem reasonably clear. The first is, that the basis of capitalization ought to be honest expenditure; and secondly, that few, if any, railroads probably pay upon an honest expenditure a rate in excess of the rate which they may legally pay; and thirdly, that under commercial and competitive conditions it is impossible for many railroads to pay even the rate which they may lawfully. There very well might be a consensus of opinion that a certain railroad would be justified in earning a net return of five million dollars, which we would say might be four per cent. on an honest expenditure; but the conditions are such in the case of the majority of railroads that they never have earned this return, and it is doubtful if they ever will.

Should the Standard be determined by the Cost on the Best Lines?

Before passing to the important and intricate question of how the burden of the cost of transportation should be apportioned among the numerous articles of traffic, it will be of value to discuss for a moment the opinion of the Interstate Commerce Commission "In the Matter of Proposed Advances in Freight Rates," given April 1, 1903. This opinion is an extremely valuable contribution to the literature of railroad economics. In reading this opinion, which was written by Mr. Commissioner Prouty, one cannot help being impressed with the keenness of its logic and with the remarkable clearness of statement, until the final conclusion is reached as to the proper basis for fixing rates, when, it is respectfully submitted, a conclusion is drawn which is not warranted by the remarkably clear analysis and discussion which precede it. The Commission in this opinion is endeavoring to arrive at the cost of transportation, and although it says that it would hardly be just to compel the fixing of a rate which was reasonable with respect to the best equipped line alone, nevertheless it goes on and makes its comparisons with the cost of transporting grain on the Lake Shore & Michigan Southern Railroad, which unquestionably is so situated and equipped that it can carry traffic at a less cost than any other great railroad in the country; and the Commission, after analyzing the profitableness of the grain traffic on this road, draws a conclusion that the proposed advance in rates is unwarranted. This conclusion may be right, but the danger lies in reaching the conclusion by a comparision which would lead to most disastrous results if used as the general basis for determining the reasonableness of rates.

The opinion suggests a problem and a difficulty. Assuming that the rates prevailing enable the Lake Shore & Michigan Southern to earn on its stock an unreasonably large dividend, and yet such rates, when applied to other railroads, when tested by the net return to capital, cannot be said in any way to be unreasonable, what is the situation? Of course, it is absurd to say that

other competitive lines may be allowed to exact a higher rate than the Lake Shore & Michigan Southern. Each competitive road must make practically the same rates. The Commission has said that it would be obviously unfair to take as a standard the least favorably situated railroad, but it has seemed to think that there is no alternative between taking the least favorably and the most favorably situated.

Assume for the moment that the prevailing rates leave to the Lake Shore an unreasonably large margin, judged by the cost of transportation. Now, the road pays only such dividends as the law — that is, the people — has said that it can pay. Who then can complain if the railroad is earning what by law it has a right to earn? How can the rates be said to be unreasonable when the only possible test of reasonableness is the surplus which is left after paying operating expenses and when the people have said that that surplus belongs to the stockholders?

Probably the answer of the Commission on this point would be, that this railroad has expended its enormous surplus in permanent improvements and in other expenditures which are not absolutely necessary for proper operation of the railroad. It is not and cannot be claimed that this surplus is foolishly wasted, but that it is charged up in large part to operating expenses. In other words, the contention is that rates should not be so high as to enable so large a surplus to be accumulated, but that the public ought to profit by the railroad's favorable circumstances to secure lower rates. If this were the case of a single railroad, whose action in the fixing of rates would not affect one way or another other railroads and communities, this argument would perhaps be sound. But let us see what would be the result upon other railroads and other communities if the rates on the Lake Shore & Michigan Southern were reduced to such a point as to make it barely possible to declare the dividends to which its stockholders are entitled. It is admitted that the rates on competitive traffic, which would yield this railroad merely a fair return, would yield to many of the competitive lines a rate which would be unreasonably low, and might, in some cases, result in the carrying of traffic at a rate not much

more than the actual cost of operating. Whom would it affect? In the first place, it is clear that these competitive railroads would find a great shrinkage in revenue from this particular class of traffic. Now, these railroads are entitled to pay dividends, and if their managers are competent officers they will endeavor to increase their earnings from other non-competitive traffic. The inevitable result would be that the local traffic along the line of these railroads would have to bear more than its fair share of the transportation burden. Shippers in Chicago would be able to avail themselves of the low rates, but shippers along the lines of the less favorably situated railroad would find that they were paying much higher rates than people in Chicago, although the distance traversed was much less. The inevitable result would be that communities along the lines of these railroads would be put at a distinct disadvantage as compared to the communities which could avail themselves of the competitive conditions. The Supreme Court of the United States has held, in numerous cases, that there is nothing in the Interstate Commerce Act to prevent the imposition of higher rates for a shorter haul, when the rates for the longer haul are fixed by competition.

Would it not be better that the Lake Shore & Michigan Southern Railroad be allowed to pay large dividends, rather than that all non-competitive communities off of its line should be allowed to suffer? And if this railroad, instead of paying still larger dividends, sees fit to take its surplus earnings and put them into permanent improvements, what harm results? Who is the beneficiary of this accumulated surplus? Not the stockholders, if the limit of dividends authorized by law has been reached. Not the employees or the officials, whose stipends are fixed largely by competitive reasons. Those who benefit are those who live along the line of the railroad and those who patronize the railroad. And why should not the communities whose natural advantages are such as to enable the transportation of freight to be accomplished at the lowest possible figure be the ones to profit by their own natural advantages? The logical conclusion, therefore, is that the cost

of transportation on the most favorably situated line ought not to determine the reasonableness of rates.

Principles Governing Rates and Classification.

Let us now assume that we have been able to determine how much net income a railroad is justified in earning ; the next problem, and the most intricate and difficult, is to determine by what standard, or according to what principles, this ought to be apportioned among the various articles of traffic; or, in other words, to determine how many cents per hundred pounds should be charged on the various articles of transportation for the innumerable distances each article may have to travel. It is at once seen that with eight or nine thousand different articles of commerce offered for transportation, for distances ranging from two or three miles to several thousand miles, the problem is of the greatest practical difficulty, if even approximately proper results are to be accomplished.

The railroads have greatly simplified the problem in two ways. In the first place, they have attempted to divide, approximately, all of the traffic into six different classes, and then have fixed the same rate for all articles in any particular class. There are, of course, numerous exceptions, but, on the whole, these distinct classes contain the great bulk of the articles of commerce. Then, as is well known, the rate on a class is determined by fixing rates for some standard distance, as, for instance, between Chicago and New York, and then dividing up the rest of the territory on a percentage basis. For example, certain territory south of Chicago may be 110 per cent. territory ; that is, the rate from points within this territory to New York will be 110 per cent. of the Chicago rate ; or a point east of Chicago may be within the 90 per cent. territory, and the rate would then be 90 per cent. of the Chicago to New York rate.

If a practical traffic man is asked upon what principles he determines classification, he too often answers that he studies the situation and makes a classification and a rate as high as the traffic will bear. Some of our most prominent traffic officials have made statements substantially like this in hearings before

the Interstate Commerce Commission, and nothing has been more prejudicial to the cause of the railroads than such statements. It is probable that these railroad men do not mean quite what they say, and it is certain that the results of their efforts in classifying are much fairer to the public than such a method would, on its face, indicate. If this is the method commonly prevailing, it can be justified only on the ground that the results are not unfair to the public. That this is not a proper standard is apparent. There might, for instance, be a great scarcity of hay in New England and a great abundance in the West; the owners of horses and cattle in the East must have hay, at almost any price, and hay would move from the West to the East, even if rates were double what all may regard as reasonable rates. The traffic would bear a higher rate and the traffic would move more or less freely under such higher rate.

Some railroad officials take the position that freight should be classified and rates fixed according to the actual cost of transportation, taking into consideration, of course, the volume of traffic, the risks of loss, and similar elements. Here is suggested a basis which is not unreasonable, but at the same time, these principles do not govern railroads in their present methods of fixing rates. For instance, the rate on a carload of cloth from Chicago to New York is four times the rate on a carload of grain, but this large difference is not made up by the additional element of risk, for although the loss of a carload of cloth would be much greater than the loss of a carload of grain, nevertheless, as there would so rarely be any loss, the element of risk is very trifling. An examination of the classification will show that in the case of very few articles does the railroad fix its rates purely on the basis of cost of transportation.

Consideration is always given to the value of the commodity on the theory that articles of great value in small bulk can bear a larger proportion of the cost of transportation than articles of low value. It is probable that the railroads have worked largely on the theory that high value traffic will better stand the increased rate, but whatever the theory may be, it is submitted that the results are correct.

The rates of transportation are in the nature of a tax upon the community, and may not the principles governing the imposition of taxes have some bearing upon the taxes levied by transportation companies? It is a fundamental principle of taxation that the necessities of life should bear as little of the burden as possible, and that those individuals who are best able to pay shall pay the larger amounts. No one has suggested that the proper basis of taxation should be according to the benefits received ; that the man with five children should pay a larger proportion of the school tax than the man with one, or that the owner of a jewelry store should pay more of the police tax than the occupant of a boarding house. As a public service corporation, therefore, ought not the railroad to take into consideration, in fixing its rates, the persons upon whom the burden of the charges must fall ?

An examination of rates and classifications will show that railroads, consciously or unconsciously, are governed by all the principles suggested above. Let us now bring to a focus the various elements.

1. *Cost of transportation.* While it is not true that railroads do or ought to determine their rates solely by the cost of transportation, there can be no doubt that this is the principal element entering into the fixing of rates. The cost of service depends upon various factors, chief among which are, (1) volume of traffic ; (2) distance ; (3) risk of loss ; (4) space.

The volume of traffic is one of the principal elements entering into the cost, which decreases as the volume increases. A carload can be moved much more cheaply per hundred pounds than a quarter of a carload, and a train load likewise much more cheaply relatively than a carload. This element is given practical consideration daily by traffic managers. In seeking a rate, a shipper is asked, first of all, how many carloads he will ship daily or weekly. Furthermore, the railroads in all cases give a carload rate at a figure much less than less than carload rates.

The question of distance is likewise an important factor. Of course, the cost of carrying traffic a thousand miles is greater than carrying it a hundred miles, but the cost is not by any

means in proportion to the distance. A way freight picks up traffic at numerous stations, which service involves a greater wear and tear on rolling stock, and a greater loss of time, necessitating higher wages per mile of service. For example, on some railroads train men on through trains are paid upon the basis of a hundred miles travel, whereas men on a local train are paid the same wages on a seventy-five mile basis. The greater cost of a pick-up traffic is fully appreciated by railroad men, but the importance is not realized by theorists.

The element of risk of loss by breakage, theft or fire is not of great importance, except in the case of a comparatively few articles of transportation. Show-cases are liable to breakage even by the ordinary movement of freight trains; boots and shoes are especially attractive to the ordinary railroad thief, and all inflammable material has to be guarded with great care and at large expense. In such cases the element of risk may be very considerable in determining the cost of service, but it does not play an important part in fixing the rate in the great majority of cases.

The most important element, under a system of fixing rates determined by weight, is density. A carload of uncompressed feathers may not weigh a thousand pounds, and yet it will be necessary to haul 30,000 pounds of dead weight. The revenue yielded on a rate of so many cents per hundred pounds would be very slight unless the rate per hundred pounds was very high, whereas a carload of wheat weighing 60,000 pounds would only require the same amount of dead weight to be hauled as a carload of very light traffic. In other words, the loading capacity of any commodity is an element which enters very largely into the consideration of the rate. It unquestionably costs a little more to haul a car loaded with 50,000 pounds than a car loaded with 20,000 pounds, but the difference in cost does not for a moment compare with the difference in amount.

The above are the principal elements which ordinarily enter into the cost of service, but in some cases there are other elements which are of the most importance. For instance, in the

transportation of meat, it is necessary to have refrigerator cars, for which a high mileage is paid, and which have to be hauled one way empty. The same is true of transportation of live animals, and of some commodities. The detention of cars in loading and unloading, as in the case of hay, is an important element. In fact, there is probably hardly a commodity which has not some other element which is an important one to be considered in the cost of transportation.

2. *The value relative to bulk.* At hearings before courts and commissions, traffic men often say that value cuts no figure in making a rate. This statement is not true, as I have indicated above. If it were true, it would be ignoring an important element in determining the distribution of the burden of transportation. Commodities valued at a thousand dollars per hundred weight, ought to and do have a higher rate than commodities valued at one dollar per hundred pounds. Why any traffic man should make a statement that the value is of no importance in fixing a rate is hard to conceive. What these men mean is, probably, that where the differences in value are not marked, no difference is made in the rate; that no higher charge is made for wheat when it is a dollar a bushel than when fifty cents a bushel. This, of course, is true, and with only six classifications, it would be absolutely impossible to figure this element to a nicety. To make a classification on a strictly theoretical basis is impracticable and the only results which we can hope for are approximate.

3. *Incidence of the burden.* Whether or not a railroad can be compelled to make a lower rate on an article simply because it is an article of common necessity is doubtful, but the more clearly railroads recognize their public service functions, the more likely they are to give consideration to this element. People who spend a hundred thousand dollars a year on their living expenses will consume less flour than a man earning $1.25 a day, and the burden of transportation on flour ought to be as low as possible. The same is true of meats. There is, however, no special reason why a low rate should be made upon champagne.

Consideration, therefore, ought to be paid, it is respectfully submitted, to the persons upon whom the burdens will fall.

4. *Competition and commercial conditions.* The foregoing may be regarded as the basic elements entering into the determination of rates, or the fundamental principles of a scientific adjustment. But often the scientific theory does not fit the facts, or rather the theorist has predicated his proposition upon facts which are not wholly true, or he has left out some important disturbing factor. In the fixing of rates the factors which play the most important part are not cost of transportation, nor the value of the commodity, nor the incidence of the burden, but competition of other carriers and commercial conditions.

Competition may be by other railroads, by water carriers, by electric street railways, or even by wagon transportation, as in the case of local express companies. The steam railroad may have to cut its rates to a point which pays little above the bare cost of transportation in order to get any business at all. This is true generally in local business affected by electric railway competition and by local expresses. It is also true of long haul business which can be secured often only by making the rate less than that to which the railroad is equitably entitled. Long haul and very short haul business is ordinarily affected by competition, and the rates are fixed regardless of almost any other factor. Our Supreme Court has recognized to the fullest extent the effect of competition in fixing rates lower for long distance competitive points than for short distance non-competitive points. The Interstate Commerce Commission in its decisions has attempted to enforce with great strictness the prohibition against charging a higher rate for a shorter haul than for a longer haul, but the Supreme Court has in every instance overruled the Commission and given the fullest weight to competitive conditions as often justifying a less rate for a greater service.

The skill of the traffic manager depends, first, upon his handling non-competitive traffic in a manner to avoid the least possible friction with the public; secondly, upon his ability to secure competitive traffic by methods which do not unneces-

sarily antagonize his competitors or connections; and, thirdly, by studying commercial and industrial conditions, so as, by an adjustment of rates, to move traffic which otherwise would not move. The importance of this consideration in fixing rates has been forcibly stated by President Lucius Tuttle of the Boston & Maine Railroad in his testimony before the Interstate Commerce Commission in reference to import and domestic rates. Among other things, he said:

"It is a duty of transportation companies to so adjust their freight tariffs that, regardless of distance, producers and consumers in every part of this country shall, to the fullest extent possible, have equal access to the markets of all parts of this country and of the world; a result wholly impossible of attainment if freight rates must be constructed upon the scientific principle of tons and miles; — and this is the principle that must control in the successful conduct of all import as well as export business. . . . It is an unalterable law of trade that transportation tariffs must be so adjusted that salable goods may be moved, at the lowest practical cost, to the most distant as well as the nearby markets, and obedience to this law is the actuating spirit that governs in the making of freight rates by all of the great railroad systems and trans-Atlantic lines of the present day. . . .

"If all freight tariffs could be constructed upon the scientific principle that so many tons of each kind of merchandise shall, always and everywhere, be transported just so many miles for just so much money, and that the performance of each item of transportation shall always bear its exact proportion of cost, and produce its equally exact proportion of profit, the making of tariffs, and the conduct of public transportation would be greatly simplified; but the first result would be the restriction of all commercial intercourse within narrow circles or zones, beyond the average width of which it would be impossible, except in the most limited way, to carry on those indispensable commercial processes of purchase, sale and interchange of the world's natural and manufactured products, which are inherently necessary to all general business prosperity."

This is a lucid exposition of the bald statement so often made by traffic managers that rates are determined by what the traffic will bear. If they mean *all* that the traffic will bear (and this is the sense in which they are understood by the public), they are

maintaining an indefensible position; but if they mean *only* what the traffic will bear in order to bring about a free movement, which is at once beneficial to the railroad and to the public, they are stating one of the most important principles in the fixing of rates.

Any rate on competitive traffic and other traffic, which would not move but for a low rate, and which yields a profit over and above the bare cost of hauling, is justifiable from the point of view of railroad finance. It is also justifiable from the point of view of the public, although this conclusion is not commonly agreed to. It is assumed that a greater share of the burden of transportation is thrown upon non-competitive and local traffic if a very low rate is made upon other traffic. Any traffic which could not be secured but for the low rates will yield to the railroad an increased net income, assuming of course that the rate pays something more than the bare cost of hauling. This gives a larger net fund and in the long run will either give the public the benefit of improvements or non-competitive traffic the benefit of reduced rates. The successful traffic man is the one who studies commercial conditions and fixes his rates so that traffic is moved which otherwise would not move. The effect of the regulation of rates by law is to deprive railroads of such traffic. The legislation pending in Congress to give the Interstate Commerce Commission absolute power to enforce the long and short haul clause is most dangerous and far-reaching in its effects.

This discussion, whether or not profitable in arriving at some proper understanding whereby to test the reasonableness of rates, at least indicates the difficulties not only of fixing a standard, but the greater and almost unsurmountable difficulties in putting the principles in practical operation. Ought such a herculean task to be entrusted to any body of men? Ought not the railroads, for their own protection, to do everything in their power to prevent the enactment of such a calamitous law? Ought they not to do everything in their power to appease the public, and thus put an end to the agitation? They can do this in two ways. First, by recognizing to the fullest extent their

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public obligations, and secondly, by treating with all respect the representatives of the public who have been entrusted with the supervision of transportation matters. The Interstate Commerce Commission, even with its limited powers, serves a most salutary purpose, and every railroad which is governed by proper principles ought to be thankful that there exists such a body, which can, to a considerable extent, control its more or less unscrupulous competitors. Railroad managers when called upon to testify before that body ought to show greater frankness and courtesy, and ought to recognize the fact that they are appearing before the representatives of the people from whom come the great powers which enable the owners of railroad properties to build and operate them.